



FEMA

December 17, 2024

MEMORANDUM FOR: FEMA Regional Administrators

ATTENTION: Federal Coordinating Officers
Regional Recovery Division Directors
Regional Mitigation Division Directors
Consolidated Resource Center Directors

FROM: Deanne Criswell
Administrator [REDACTED]

SUBJECT: Implementation of Inflation Reduction Act Section 70006 for
FEMA Public Assistance and Hazard Mitigation Assistance Programs

The Inflation Reduction Act (IRA) authorizes FEMA to provide financial assistance under the Building Resilient Infrastructure and Communities and Pre-Disaster Mitigation programs;¹ the Hazard Mitigation Grant Program and the Hazard Mitigation Grant Program Post-Fire;² and the Public Assistance Program³ for: “(1) costs associated with low-carbon materials; and (2) incentives that encourage low-carbon and net-zero energy projects through Sept. 30, 2026.”⁴

To implement this authority, FEMA issued [PA-HMA Joint IRA 70006 Memorandum Low Carbon Materials Definition](#) in March 2023 and [PA- HMA Joint IRA 70006 Addendum - Net-Zero Energy Projects Definition](#) in January 2024. This memo revises, consolidates, and supersedes these memos.

Public Assistance (PA) Program

This memo applies to unobligated PA permanent work⁵ projects on declarations between Aug. 16, 2022, and Sept. 30, 2026.

Low-Carbon Materials

To encourage PA applicant⁶ incorporation of low-carbon materials within an otherwise eligible PA project, FEMA will reimburse an applicant repairing or replacing a public facility for any increased costs of incorporating low-carbon materials within the project, at the applicable Federal cost-share for the disaster⁷.

¹ Building Resilient Infrastructure and Communities, 42 U.S.C. § 5133(h).

² Hazard Mitigation Grant Program, 42 U.S.C. § 5170c(a).

³ Public Assistance Program, 42 U.S.C. § 5172(b).

⁴ Inflation Reduction Act of 2022, Pub. L. No. 117-169, §70006, 136 Stat. 2087. [Text - H.R.5376 - 117th Congress \(2021-2022\): Inflation Reduction Act of 2022 | Congress.gov | Library of Congress.](#)

⁵ Permanent Work means that restorative work that must be performed through repairs or replacement, to restore an eligible facility on the basis of its pre-disaster design and current applicable standards. 44 C.F.R. § 206.201(i) (2023).

⁶ For PA, applicant means a state agency, local government, or eligible private nonprofit organization... submitting an application to the recipient for assistance under the State’s grant. 44 C.F.R. § 206.201(a) (2023).

⁷ [eCFR :: 44 CFR 206.47 -- Cost-share adjustments.](#)

Low-carbon materials eligible for funding include asphalt, concrete, glass, and steel which have a [Global Warming Potential \(GWP\)](#) lower than the estimated industry average for similar products in North America as demonstrated by their [Environmental Product Declaration \(EPD\)](#). See definitions for low-carbon materials and projects.

Net-Zero Energy Projects

To encourage PA applicant incorporation of net-zero activities within an otherwise eligible PA project, FEMA will reimburse any increased costs over traditional methods of designing and implementing a PA project, or an element of the PA project, to be net-zero. Costs will be reimbursed at the applicable Federal cost-share for the disaster.

Funding is available for the purpose of implementing net-zero activities only as an element of an eligible PA project.

Additional costs are allowed as follows:

Replacement Projects

When a replacement project is to be constructed to be net-zero, the increased expense is eligible where the new building meets or exceeds the energy performance thresholds and renewable generation requirements specified in the zero energy appendices of the 2021, or the most recent version, International Energy Conservation Code (IECC), Appendix CC Zero Energy Commercial Building Provisions⁸ and Appendix RC Zero energy Residential Building Provisions⁹. These appendices provide calculations which ensure the project generates renewable energy in an amount equivalent to or greater than the annual energy consumption of the replacement project. A replacement project constructed to be net-zero requires the generation of renewable energy.

When the replacement project is incorporating high performance equipment and materials to further reduce the facility's overall energy consumption, the increased expense is eligible if the applicant's high-performance equipment and materials meet or exceed the requirements outlined in Chapter 7 Energy Efficiency¹⁰ and Normative Appendix B Prescriptive Equipment Efficiency Tables for the Alternate Reduced Renewables and Increased Equipment Efficiency Approach in Section 701.4.1.1 (7.4.1.1)¹¹ (if applicable) in the 2021¹² or most recent version of the International Green Conservation Code (IgCC). A replacement project constructed for net-zero may incorporate high performance equipment and materials but is not required.

Repair Projects

When a project repairs a portion of a facility, the increased expense to make the repairs net-zero is eligible if the repaired portion meets or exceeds the energy performance thresholds and renewable generation requirements specified in the zero energy appendices of the 2021, or the most recent version, of IECC, appendix CC and RC for commercial and residential, respectively. These appendices provide calculations to ensure the project generates renewable energy in an amount equivalent to or greater than

⁸ [2021 International Energy Conservation Code \(IECC\) - APPENDIX CC \(iccsafe.org\)](#).

⁹ [2021 International Energy Conservation Code \(IECC\) - APPENDIX RC \(iccsafe.org\)](#).

¹⁰ [2021 International Green Construction Code \(IgCC\) - CHAPTER 7 \(iccsafe.org\)](#).

¹¹ [2021 International Green Construction Code \(IgCC\) - NORMATIVE APPENDIX \(iccsafe.org\)](#).

¹² [2021 International Green Construction Code \(IgCC\)](#).

the annual energy consumption of the repair project. A repair project constructed to be net-zero requires the production of renewable energy.

When the repair project is incorporating high performance equipment and materials to further reduce the repaired portion of the facility's overall energy consumption, the increased expense is eligible if the applicant's high-performance equipment and materials meet or exceed the requirements outlined in Chapter 7 and Normative Appendix B (if applicable) in the 2021 or most recent version of the IgCC. A repair project constructed for net-zero may incorporate high performance equipment and materials but is not required.

Hazard Mitigation Assistance (HMA) Programs

This memo applies to the Hazard Mitigation Grant Program (HMGP), HMGP-Post Fire, Building Resilient Infrastructure and Communities (BRIC) and Pre-Disaster Mitigation (PDM) programs.

HMGP applicants¹³ may seek funding under this memo for major disaster declarations between Aug. 16, 2022 and Sept. 30, 2026, with open application periods as of the issuance of this memo, provided all other program requirements are satisfied. HMGP Post-Fire applicants may seek funding under this memo for Fire Management Assistance Grant declarations between Aug. 16, 2022 and Sept. 30, 2026, with an open HMGP-Post Fire application period as of the issuance of this memo, provided all other program requirements are satisfied.

BRIC applicants may seek funding pursuant to [Fiscal Year \(FY\) 2023 Notice of Funding Opportunity](#), which includes incentives, through additional application points, for applicants who incorporate low-carbon materials or net-zero energy components in their project scopes. Refer to Notices of Funding Opportunities for more information.¹⁴

PDM applicants should refer to Notices of Funding Opportunities for more information.

Low-Carbon Materials

To encourage use of low-carbon materials in otherwise eligible hazard mitigation projects, FEMA will include within eligible project costs any increase in costs to incorporate low-carbon materials at the applicable Federal cost-share for the project.

Low-carbon materials eligible for funding include concrete, asphalt, glass, and steel which have a [Global Warming Potential \(GWP\)](#) lower than the estimated industry average for similar products in North America as demonstrated by their [Environmental Product Declaration \(EPD\)](#). See definitions for low-carbon materials and low-carbon projects.

Net-Zero Energy Projects

To encourage otherwise eligible hazard mitigation projects to incorporate net-zero activities, FEMA will

¹³ For HMGP, **applicant** means the non-Federal entity consisting of a State or Indian Tribal government, applying to FEMA for a Federal award under the Hazard Mitigation Grant Program. Upon award, the applicant becomes the recipient and may also be a pass-through entity. 44 C.F.R. § 206.431 (2023).

¹⁴ **Applicant** means the entity, such as a state, federally recognized tribe or territory applying to FEMA for a federal award that will be accountable for the use of the funds. Once funds are awarded, the applicant becomes the recipient or pass-through entity or both. See page 566 of the [Hazard Mitigation Assistance Program and Policy Guide \(fema.gov\)](#).

include, within eligible project costs, any increased costs over traditional methods of designing and implementing hazard mitigation projects to be net-zero. Costs will be reimbursed at the applicable federal cost-share for the project.

Funding is available for the purpose of implementing net-zero activities only as an element of an eligible hazard mitigation project.

To be identified as net-zero, the following requirements will be taken into consideration to allow for additional costs:

New Construction

When a hazard mitigation project is constructed, the increased expense is eligible where the new building meets or exceeds the energy performance thresholds and renewable generation requirements specified in the zero energy appendices of the 2021 IECC, Appendix CC and RC for commercial and residential, respectively. These appendices provide calculations to ensure the project produces renewable energy generation in an amount equivalent to or greater than the annual energy consumption of the hazard mitigation project. A hazard mitigation project constructed to be net-zero requires the production of renewable energy.

When the hazard mitigation project is incorporating high performance equipment and materials to further reduce the building's overall energy consumption, the increased expense is eligible if the high-performance equipment and materials in the building, equipment and materials meet or exceed the requirements outlined in Chapter 7 and Normative Appendix B (if applicable) in the 2021 or most recent version of the IgCC. A hazard mitigation project constructed for net-zero may incorporate high performance equipment and materials but is not required.

Existing Buildings

When an existing building is transitioning to net-zero energy, within an eligible hazard mitigation project, the building (or portion of the building) must meet or exceed the energy performance thresholds and renewable generation requirements specified in the zero energy appendices of the 2021 IECC, appendix CC and RC for commercial and residential, respectively. These appendices provide calculations to ensure the project produces renewable energy generation in an amount equivalent to or greater than the annual energy consumption of the hazard mitigation project. A hazard mitigation project constructed to be net-zero requires the production of renewable energy.

When the existing building is incorporating high performance equipment and materials to further reduce the mitigated portion of the building's overall energy consumption, the increased expense is eligible if the building, equipment and materials meet or exceed the requirements outlined in Chapter 7 and Normative Appendix B (if applicable) in the 2021 or most recent version of the IgCC. A hazard mitigation project constructed for net-zero may incorporate high performance equipment and materials but is not required.

Jurisdictional Code Updates

HMGP, HMGP-Post Fire, and BRIC applicants are eligible for funding to adopt, implement and enforce building code upgrades.

To be eligible for expenses related to building code upgrades, the upgrades must produce buildings that meet or exceed the energy performance thresholds and renewable generation requirements specified in the zero energy appendices of the 2021 IECC appendix CC and RC for commercial and residential, respectively. Additionally, applicants may pursue upgraded codes pursuant to Chapter 7 and Normative Appendix B (if applicable) in the 2021 or most recent version of the IgCC.

Definitions

Embodied Carbon (or Embodied Greenhouse Gas): Embodied carbon—also known as embodied greenhouse gas (GHG) emissions—refers to the amount of GHG emissions associated with upstream—extraction, production, transport, and manufacturing—stages of a product’s life.

Environmental Product Declaration (EPD): A transparent, third party, verified report used to communicate the environmental impact associated with the manufacture or production of construction materials.

Global Warming Potential (GWP): An index measuring the radiative forcing following an emission of a unit mass of a given substance, accumulated over a chosen time horizon, relative to that of the reference substance, carbon dioxide (CO₂). The GWP thus represented the combined effect of the differing times these substances remain in the atmosphere and their effectiveness in causing radiative forcing.

Greenhouse Gas: The air pollutants carbon dioxide, hydrofluorocarbons, methane, nitrous oxide, perfluorocarbons, and sulfur hexafluoride.¹⁵

Low-Carbon Materials: Construction materials and products that “have substantially lower levels of embodied greenhouse-gas emissions associated with all relevant stages of production, use, and disposal, as compared to estimated industry averages of similar materials or products.”

- Low-carbon materials include concrete, asphalt, glass, and steel which have a Global Warming Potential (GWP) that is lower than the estimated industry average for similar products in North America as demonstrated by their Environmental Product Declaration (EPD). A product-specific Type III (third-party verified) EPD must be shown and reported in a third-party dataset, such as [the Embodied Carbon in Construction Calculator \(EC3\) tool](#). Use of a published and verifiable dataset is required until superseded by notice of publicly available standards and/or database issued by the Environmental Protection Agency (EPA), Federal Emergency Management Agency (FEMA), General Services Administration (GSA), or other Federal Agency guidance.
- EPA’s Interim Determination focuses the low-carbon materials to the four major polluters during production, which are concrete (and its component cement), asphalt, glass, steel, and assemblies comprised of at least 80 percent of qualifying materials. Based on the EPA’s initial review of state and local approaches and other research to-date, these materials offer the most significant opportunities to address the embodied greenhouse-gas emissions of federal construction projects. FEMA is currently limiting materials for funding consideration to these four materials until further guidance from EPA, or other Federal Agency guidance, is available.

Low-Carbon Projects are defined as those where 30 percent or more of materials (concrete, glass, asphalt, steel), by cost of the total value of permanently installed building products, in the project are

¹⁵ IRA Section 60116(a).

either low-carbon materials, salvaged, or a combination of the two. Low-carbon projects result in a lower total embodied carbon footprint than standard buildings. The methodology outlined in this document is consistent with current approaches identified by the [US Green Building Council](#) and the [EPA's definition for salvaged materials](#) published on November 15, 2023.

Net-Zero Energy Projects.

New construction, major renovation projects, and existing building overhauls will meet or exceed energy performance thresholds set by the IECC, appendices CC and RC, as a result of renewable energy or energy-saving updates. These projects must produce renewable energy generation in an amount equivalent to or greater than the annual energy consumption of the entire facility (or applicable portion of the facility).

In addition to the required renewable energy generation, applicants have the option to pursue high performance equipment and materials to further reduce the facility's overall energy consumption. To be eligible for expenses of high-performance equipment and materials in the facility, equipment and materials must meet or exceed the requirements outlined in Chapter 7 and Normative Appendix B (if applicable) in the 2021 or most recent version of the IgCC.

Salvaged Materials: FEMA considers salvaged materials to be the deliberate reclamation of reusable materials from the disassembly, deconstruction, or demolition of buildings or structures. Minimally processed salvaged and reused materials/products and associated services are any construction materials/products salvaged and reused onsite or in other regional projects -salvaged and reused materials/products from external vendors. Note: This category of materials is not referring to recycled content in manufactured materials/products.

Substantially Lower: Having a Global-Warming Potential (GWP) that is at least less than the estimated North American industry average as demonstrated by their Environmental Product Declaration (EPD).

Under the authorities of the Inflation Reduction Act Sections 60503 and 60506, the U.S. Environmental Protection Agency (EPA) is directed to determine materials and products "that have substantially lower levels of embodied greenhouse-gas emissions associated with all relevant stages of production, use and disposal as compared to estimated industry averages of similar materials or products." On December 22, 2022, the EPA released its Interim Determination on Low-Carbon Materials Under IRA 60503 and 60506. FEMA determined to adopt modified versions of the definitions and descriptions from the EPA's Interim Determination. These definitions and descriptions may be further modified based on guidance issued by the EPA to fit the needs, mission, and existing authorities of FEMA. Please see the Definitions section: [EPA December 22, 2022 Interim Determination letter](#) for more information regarding definitions and descriptions for low-carbon materials for the purposes of implementing the IRA Section 70006(1).